I Claim

1. A telecommunications system comprising one or more nodes and a plurality of telephone exchanges wherein two or more of the telephone exchanges are arranged to communicate with each other via the one or more nodes; wherein communication via the one or more nodes is in the form of packets; wherein the one or more nodes comprise routers.

2. The telecommunications system of Claim 1 wherein communication via the one or more routers uses internet protocol (IP).

3. The telecommunications system of any Claim 1, wherein at least some of the telephone exchanges arranged to communicate with each other via the one or more nodes are trunk exchanges.

4. The telecommunications system of Claim 1, wherein at least some of the telephone exchanges arranged to communicate with each other via the one or more nodes are local exchanges.

5. The telecommunications system of Claim 1 being arranged to handle telephone calls wherein all call handling in the system takes place outside of the one or more nodes.

6. The telecommunications system of Claim 3 wherein each of the trunk exchanges has a direct link to each of the one or more nodes.

7. The telecommunications system of Claim 4 as dependant from Claim 3 wherein communication between the local exchanges and the trunk exchanges uses ATM.

8. The telephone system of Claim 1 wherein each of the two or more telephone exchanges comprise routing data relating to communication with all other exchanges in the telecommunications system and wherein the routing data is partially or wholly enabled.

9. The telecommunications system of Claim 8 wherein only that part of the routing data in a particular exchange relating to communication between that exchange and other exchanges with which that exchange is arranged to communicate via the one or more nodes is enabled.

10. The telecommunications system of Claim 1 comprising means for carrying voice traffic as ATM Adaptation Layer 1 (AAL1) or ATM Adaptation Layer 2 (AAL2).

11. The telecommunications system of Claim 1 comprising means for carrying voice traffic as voice over IP (VoIP).

12. An adapter for providing the telephone exchanges of Claim 1 with a means of inter-communication of traffic via the one or more nodes wherein the adapter comprises means for converting the traffic between packetised and non-packetised form.

13. The adapter of Claim 12 comprising means for providing interworking between synchronous transfer mode (STM) and IP domains.

14. The adapter of ~~any one of~~ Claim ~~12 or~~ 13 comprising means for detection of modem traffic.

15. The adapter of Claim 14 comprises means for converting a detected modem signal to baseband data for packetisation into IP.

16. The adapter of Claim 12 is which the traffic to be packetised comprises PSTN circuits and the adapter is arranged to only packetise active PSTN circuits.

17. The adapter of Claim 16 arranged to communicate information on which PSTN circuits are not packetised using spare capacity within an IP logical route.

18. The adapter of Claim 12 comprising means for compression of voice traffic.

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